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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,455

12/27/2005

Fabio Sigon

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EXAMINER

SMITH, JENNIFER A

ART UNIT

PAPER NUMBER

1793

MAIL DATE

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06/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,455	Applicant(s) SIGON ET AL.	
	Examiner JENNIFER A. SMITH	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

Claims 12-22 remain withdrawn.

Claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "discharged water" in lines 8, 9, and 10. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1793

Claims 1-11 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Modell (US Patent No. 4,338,199) in view of Godesbert (US Patent No. 5,562,585), as generally set forth in the Office Action of 12/31/2009.

In regard to claim 1, Modell teaches a supercritical water oxidation process used to process toxic and waste substances, illustrated in Figure 1A. Water is removed from the feed tank (11a) and heated (41) at a temperature and pressure to transform into supercritical water. Oxidation of the feed and supercritical water is performed in tank 19a. The mixture is cooled and waste heat is recycled via line 40. The inorganics precipitate and are removed by filters [See Column 3, lines 43-45]. Steam or water is recovered in output 30a or through line 40 where heat is recovered. The Modell reference teaches it is part of the invention to precipitate inorganics in the feed as from a waste slurry, since the solubility of inorganic salts in supercritical water drops to very low levels thus causing inorganics in the stream to precipitate and be readily removed as by cyclones, settling columns or filters. Thus the water output from the system is purified of inorganic salts. In addition, the feed water need not be purified prior to use allowing the use of brine or seawater without prior treatment [See Claim 4].

Modell fails to explicitly teach the waste inorganic material to be asbestos.

The Godesbert reference teaches a hydrothermal waste treatment of asbestos [See Column 2, lines 1-4].

One of skill in the art would recognize Modell's process as capable of use with asbestos materials like those disclosed in Godesberg because it is desirable to operate a technically simple and safe method of disposal of asbestos and asbestos containing materials on an industrial level [See Column 1, lines 61-67]. Modell does not limit the invention to the type of waste and teaches the precipitation of inorganic materials.

In regard to claim 2, the references fail to teach distilling the water but one of skill in the art would recognize the use of purified water as advantageous in any waste treatment process.

In regard to claim 3, Modell teaches the supercritical water is oxygenated (wet air) [See Background of the Invention).

In regard to claim 4, Godesberg et al. teaches fine-fibrous asbestos causes tissues to become diseases and in particular is linked to lung cancer if breathed in. One of skill in the art would recognize the need to operate the process disclosed by the references in a confined environment because asbestos is a dangerous material and this would ensure safe handling and disposal of the waste [See Column 1, lines 14-23].

In regard to claim 5, Modell teaches the process is continuous after startup [See Column 7, lines 57-59].

In regard to claims 6 and 7, the references fail to explicitly teach a preferred operation method but one of skill in the art would recognize both processes, based on the design of the apparatus used, as capable of continuous, discontinuous, or semi-batch operation.

In regard to claim 8, Modell teaches operating temperatures between 450-700°C, pressures above 3200 psia (22.1 MPa) and a process time in the range of 0.5 to 1 hour [See Column 3, lines 8 and 30 and Column 1, line 34].

In regard to claims 9-11, Godesberg teaches if necessary in a treatment process, the asbestos may be shredded before the coarsely comminuted asbestos fragments are exposed to treatment [See Column 1, lines 55-57]. It is particularly advantageous that this method is carried out in an aqueous suspension so no harmful dust formation can occur [See Column 2, lines 15-17].

Response to Arguments

Applicant's arguments filed 03/31/2009 have been fully considered but they are not persuasive.

Applicant argues the steps of the method of claim 1 are not disclosed in the description of the Modell reference. Namely, the cooling, filtering, and collection of the

Art Unit: 1793

waste water in a tank. In regard to these limitations added to the claims via the submitted amendments, there is insufficient antecedent basis in the claims with respect to the discharged water. It is not clear when this discharge step occurs. Based on Applicant's specification, the cooling, filtering, and collection of the discharged water appears to be taught in the Modell reference. The mixture is cooled and waste heat is recycled via line 40. The inorganics precipitate and are removed by filters [See Column 3, lines 43-45]. Steam or water is recovered in output 30a or through line 40 where heat is recovered through heat exchangers.

Applicant argues the method of the pending patent application does not teach to separate an inorganic substance from an aqueous one like in the Modell patent but instead teaches the reaction of supercritical water with asbestos. The Modell reference teaches a method of removing inorganic salts from water, with said water carrying an inorganic salt and oxygen to form a reaction mixture under conditions characterized by a temperature of at least 377°C and a pressure of at least 220 atmospheres and reaction the material to obtain a temperature of at least 450°C in an effluent stream [See claim 4] for 0.5 to 1 hour [Column 1]. These are substantially similar process conditions as those claimed by Applicants in claim 1 and a reaction of the inorganic material under such conditions necessarily follow.

Conclusion

Claims 1-11 are rejected.

No claims are allowed.

THIS ACTION IS MADE FINAL. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. SMITH whose telephone number is (571)270-3599. The examiner can normally be reached on Monday - Friday, 9:30am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/

Supervisory Patent Examiner, Art Unit 1793

Jennifer A. Smith

June 18, 2009

Art Unit 1793

JS